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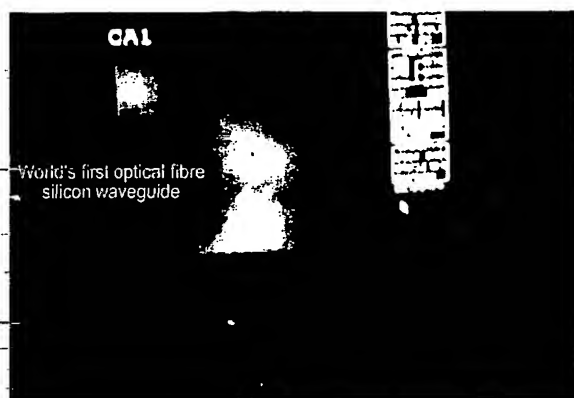
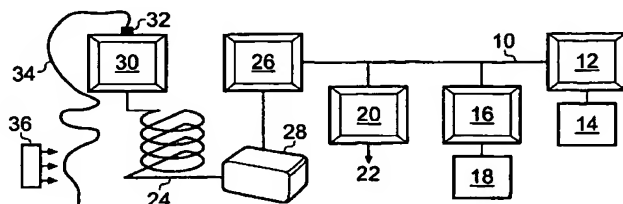
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(54) Title: **FABRICATION OF SEMICONDUCTOR METAMATERIALS**



(57) Abstract: A method of fabricating a semiconductor metamaterial is provided, comprising providing a sample of engineered microstructured material that is transparent to electromagnetic radiation and comprises one or more elongate, high aspect ratio voids, passing through the voids a high pressure fluid comprising a semiconductor material carried in a carrier fluid, and causing the semiconductor material to deposit onto the surface of the one or more voids of the engineered microstructured material to form the metamaterial. Many microstructured materials and semiconductor materials can be used, together with various techniques for controlling the location, spatial extent, and thickness of the deposition of the semiconductor within the microstructured material, so that a wide range of different metamaterials can be produced.

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